F·A·A·M facility for airborne atmospheric measurements

FLIGHT FOLDER

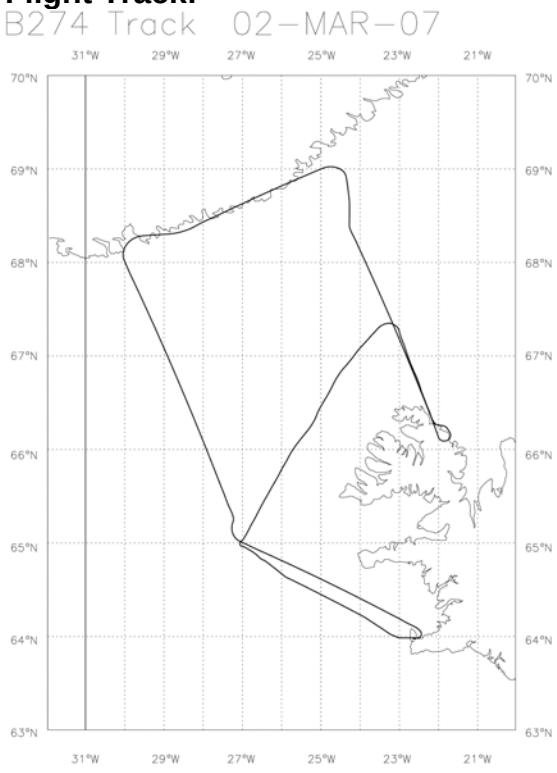
Flight No.:	B274
Date:	02 March 2007
Take Off	11:07:30
Landing:	14:54:20
Flight Time	3h46m50

Campaign: GFDEX – Barrier Wind (Plan 33)

Operating Area: Denmark Strait

POB	Position	Name	Institute
1	Captain	Alan Foster	Directflight
2	Co-pilot	Steve Ball	FAAM
3	CCM	Gaynor Ottaway	Directflight
4	Mission Scientist 1	Kent Moore	University of Toronto
5	Flight Manager	Alan Woolley	FAAM
6	Cloud Physics	Kate Turnbull	FAAM
7	AVAPS / CCM2	Stuart Heath	FAAM
8	Mission Scientist 2	Ian Renfrew	UEA
9	Mission Scientist 3	Inge Johannessen	University of Reading
10	Mission Scientist 4	Tadayasu Ohigashi	University of Toronto
11	Mission Scientist 5	Carling Hay	University of Toronto
12	Mission Scientist 6	Dave Sproson	UEA
13			
14			
15			
16			
17			
18			
19			
20			

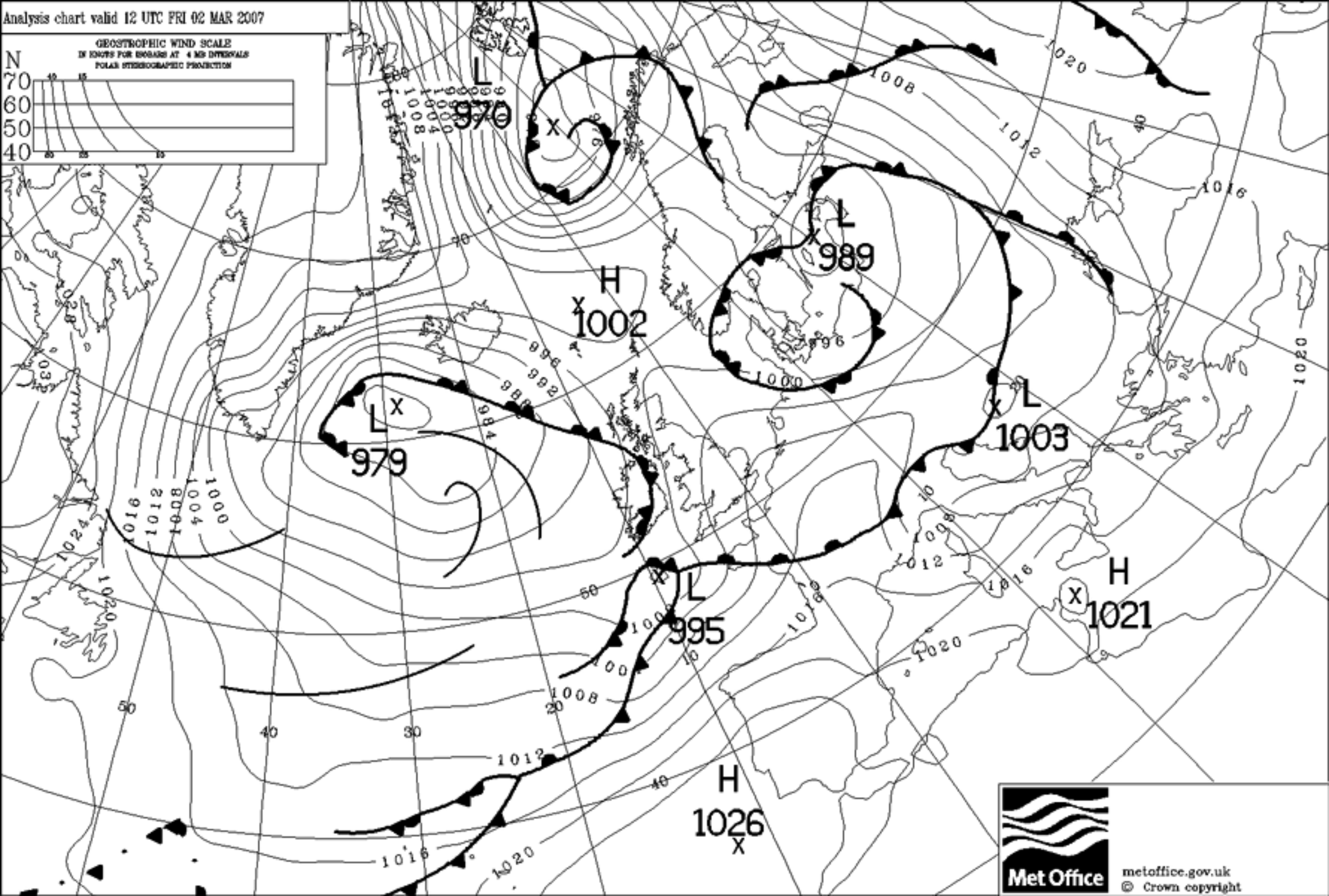
Flight Track:



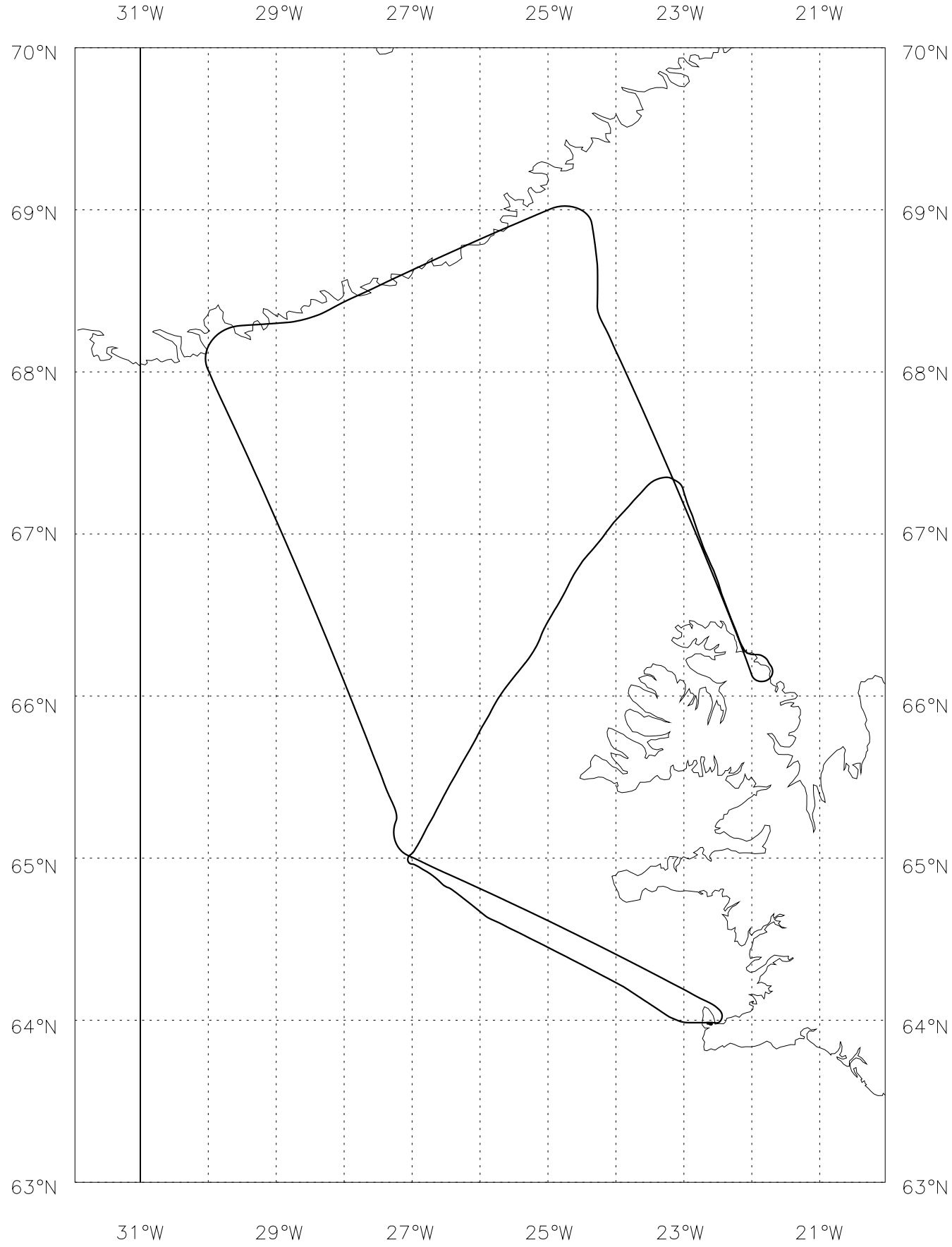
FLIGHT SUMMARY

Flight No b274
Date: 2/3/07
Project: GFDEX
Location: Denmark Straits - Barrier Wind

Start Time	End Time	Event	Height (s)	Hdg	Comments
110730		T/O	1.8 kft	096	
113546		Sonde 1	24.0 kft	289	
113546	121023	Run 1			
114452		Sonde 2	25.0 kft	332	
115346		Sonde 3	25.0 kft	329	
120155		Sonde 4	25.0 kft	327	
121023		Sonde 5	25.0 kft	327	
121023	123104	Run 2			
123104		Sonde 6	25.0 kft	063	
123104	130311	Run 3			
124250		Sonde 7	25.0 kft	169	
125257		Sonde 8	25.0 kft	168	
130311		Sonde 9	25.0 kft	165	
132218	133256	Run 4	0.47 kft	349	
133559	143000	Run 5	0.44 - 2.8 kft	227	Approx end time
145420		Land	0.89 kft	091	Keflavik
150127		standstill	0.95 kft	314	63'58.46N, 22'35.80W


Analysis chart valid 12 UTC FRI 02 MAR 2007
GEOSTROPHIC WIND SCALE
IN KNOTS FOR 850MB AT 4 MB INTERVALS
POLAR STEREOGRAPHIC PROJECTION
N
70
60
50
40
L
970
L
989
H
1002
L
979
L
1003
L
995
H
1021
H
1026
Met Office
metoffice.gov.uk
© Crown copyright

B274 Track 02-MAR-07



GFDex Sortie Brief – B274 – 2 March 2007
Barrier Winds (Plan 33)

Mission Scientist 1: Kent Moore
Mission Scientists: Ian Renfrew, Carling Hay, Inge Johannessen, Stephen Outten, Edar Barstad, Tadayasu Ohigashi

Aims

- Investigate the structure of barrier winds along the Southeast Coast of Greenland
- Map out the the heat fluxes associated with the barrier winds
- Total dropsondes 9

GFD41	Time	Manoeuvre	Distance (nm)	Duration (min)	Total time (min)
1	1030	Take off Keflavík , transit to 65N, 27W	129	~30	~30
2		Straight level run at 25-30 kft to 68N, 30W dropping sondes every 50nm (5 sondes)	194	~40	~70
3		Straight level run at 25-30kft to 69N, 25W	125	~25	~95
4		Straight level run at 25-30 kft, 66.25N, -23.1 W dropping sondses every 50 nm except at endpoint (4 sondes)	178	~35	~130
5		Descent arriving at 67N 22.8W at 100feet		~	~
6		Straight level run at 100 ft to 68.2N 24W	125	~40	~170
7		Straight level run at 100-1000 ft to 67.3N,29.2W	130	~40	~210
8		Straight level run at 100 ft to 63.5N, 25.6W	245	~70	~280
9		Return to Keflavik	90	~20	~300

Mission Scientist's Log

Flight No B274 Date Mar 2 Name M.Weve Page 1 of 4

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
11:07					take off.
11:08		2340			low cloud below
					some breakers on sea
11:10		4670			in cloud.
11:11		7160			turbulence in clouds
11:12.		9300			above lower cloud deck
					higher cloud above
11:25		24 kft		392 ms	reached 24 kft
11:27		24 kft			out of cloud
					some high cloud ahead
11:30					RICS 1 & 2 on
					Clouds out RHS
					LHS
11:30					back in cloud
11:36					Dropsonde #1
11:37					out of cloud ahead
11:38					sonde failed no launch
					code / sonde will be
					OK.
11:40					climbe to 25 kft

Mission Scientist's Log

Flight No B274 Date Mar 2 Name Moore Page 2 of .....

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
11:45					Dropsonde #2
					launch code 01C
11:54					Dropsonde #3
12:00					in cloud
12:02					Dropsonde #4
12:06					in cloud
12:09					light turbulence
					in cloud
12:10					Dropsonde #5
					reached end of
					1st leg
12:30					Dropsonde #6
12:36					out of cloud
					over sea ice
12:37					still over ice
					ozone spike
11:40					close to end
					leads in ice

Mission Scientist's Log

Flight No B274 Date Mar 2 Name Moore Page 3 of .....

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
12:42					pics of leads out LHS
12:43					Dropsonde #7
12:47					over ice-edge
12:49					light turbulence
12:51					some high cloud above us
12:53					Dropsonde #8
12:58					broken clouds below
13:01					Dropsonde #9 start descent
13:09		1616			through high cloud! lower level cloud below can see ice/land!
13:12					9.7 Kfeet cloud tops just below
					8,500 feet into cloud
13:14					icing detected
					moderate turbulence
13:19					below cloud Tim 6 Kfeet
					WS 25 m/s
					Air temp -8
13:20					500 feet
13:32					turning south to warm probe

Mission Scientist's Log

Flight No B.217 Date ..... Name ..... Page 4 of 4

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
1349					sea spray
					moderate
1356					turbulence
1451					30 m/s
					clear-ish
1451					returning to
					Icelandic

CLOUD PHYSICS LOG

Flight No. B274 **Date: 02/03/07** **Operator: KFT** **Page 1 of 1**

G.M.T.	PCASP		FSSP	SID1	2D2-C			2D2-P			Remarks
DRS Time	Conc/cc	Mean R	Block Transfer	Particle Count	Conc/L	Max Size	Habit	Conc/m3	Max Size	Habit	
11:08											Heaters on at T/O
11:10			Bases incr								First 2D images
11:23								Data rate 1Hz			Noise on 2DP FL240
11:25:00	70	0.10	48	-	75	625	4,9	NOISE			FL240
11:27:30	73	0.06	48	-	75	200	8,11	NOISE			
11:32:00	45	0.10	52	-	40	325	4,9,8	NOISE			
11:35:47	48	0.06	53	-	28	225	4,9,8	NOISE			Sonde 1 FL240
11:40:00	42	0.06	54	-	50	200	8,11	NOISE			FFSSP Bases increased
11:44:52	52	0.06	54	-	27	175	8,11	NOISE			Sonde 2 FL250
11:47:30	45	0.07	57	-	111	225	8,11	NOISE			
11:50:00	67	0.08	62	-	60	225	8,11	NOISE			
11:53:47	85	0.06	64	-	33	100	11	NOISE			Sonde 3
11:55:00	115	0.14	66	-	44	100	11	NOISE			
12:00:00	121	0.06	70	-	2.5	125	11	NOISE			
12:01:56	195	0.06	71	-	1.5	150	8,11	NOISE			Sonde 4
12:05:00	175	0.07	73	-	40	175	8,11	NOISE			
12:07:00	186	0.06	76	-	101	275	4,9,8	NOISE			
12:10:24	325	0.06	79	-	100	250	4,9	NOISE			Sonde 5, FFSSP Bases incr
12:15:00	305	0.06	1	-	63	150	11	NOISE			FFSSP restarted + bases incr
12:20:00	300	0.06	3	-	10	100	11,9,6	NOISE			
12:22:30	333	0.06	4	-	9.5	350	11,6	NOISE			
12:25:00	324	0.06	5	-	7	250	6,11,8	NOISE			
12:27:30	238	0.06	10	-	9	275	6,11,8	NOISE			
12:30:00	311	0.06	10	-	2	150	11,6	NOISE			
12:31:05	248	0.06	10	-	11	125	11	NOISE			Sonde 6
12:38:00	221	0.06	13	-	0	0		NOISE			
12:42:50	213	0.06	14	-	0	0		NOISE			Sonde 7
12:50:00	205	0.06	18	-	1	200	8	NOISE			
12:52:56	197	0.06	29	-	18	100	11	NOISE			Sonde 8
12:56:10	201	0.06	1	-	39	325	9,4,8	NOISE			FFSSP restarted + bases incr
13:00:00	198	0.06	2	-	1.5	100	11	NOISE			
13:03:12	196	0.06	3	-	7.5	100	11	NOISE			Sonde 9
13:06:30	185	0.06	3	-	58	125	11	NOISE			FL230
13:07:04	195	0.07	4	-	47	775	11,8	NOISE			FL220

CLOUD PHYSICS LOG

Flight No. B274 **Date: 02/03/07** **Operator: KFT** **Page 2 of 2**

G.M.T.	PCASP		FSSP	SID1	2D2-C			2D2-P			Remarks
DRS Time	Conc/cc	Mean R	Block Transfer	Particle Count	Conc/L	Max Size	Habit	Conc/m3	Max Size	Habit	
13:07:39	214	0.06	5	-	113	100	11	NOISE			FL200
13:08:15	210	0.07	7	-	73	175	11,8	NOISE			FL190
13:09:10	167	0.07	8	-	1.5	200	11,8	NOISE			FL170
13:09:40	182	0.06	8	-	1	75	11	NOISE			FL160
13:10:11	281	0.06	8	-	0	0		NOISE			FL150
13:10:45	302	0.06	8	-	0	0		NOISE			FL130
13:11:10	274	0.06	8	-	0	0		NOISE			FL120
13:12:50	361	0.06	2293	-	0	0		NOISE			FL090
13:13:23	338	0.06	3571	-	0	0		NOISE			FL080
13:14:00	531	0.17	5265	-	354	600	1 (<0C)	NOISE			FL070
13:15:15	422	0.09	5766	-	94	625	1 (<0c)	NOISE			FL050
13:19:00	543	0.06	5767	-	2	800	3	NOISE			FL030
13:20:50	506	0.06	5767	-	13	725	3,7	NOISE			FL010
13:23:35	537	0.09	0	-	67	550	3,7,8	NOISE			1000FT
13:26:00	325	0.08	0	-	3	800	3,7,8	NOISE			
13:30:00	163	0.08	0	-	20	800	3,8	NOISE			100FT
13:35:00	340	0.10	0	-	20	800	3,8	10775	3200	3,8	NOISE ON 2DP TOO
13:40:00	176	0.11	0	-	50	800	3,8	20233	800	3	2dp NOISY
13:45:00	111	0.15	0	-	29	650	3,8	7091	1500	3	2DP NOISY
13:50:00	133	0.08	0	-	54	800	3,8	19256	2400	3	2DP NOISY
13:55:00	183	0.08	0	-	18	650	3,	1176	4800	3	2DP NOISY
14:00:00	118	0.08	0	-	0	0		0	0		
14:05:00	62	0.09	1	-	0	0		0	0		
14:10:00	89	0.08	1	-	6	775	3,8	341	3200	3,8	
14:11:20	109	0.09	1		5	800	5,6,3	66	2400	5,6	
14:17:00	114	0.08	1	-	9	475	5,1 <0C	1791	3200	3	500FT
14:20:00	149	0.11	1	-	104	800	5,3	7808	2400	3	500FT
14:25:00	127	0.08	1	-	62	350	1,8 <0c	3375	3200	3,8	
14:30:00	126	0.09	1	-	10	250	5,8	558	1200	5	
14:35:00	84	0.08	1	-	3	475	5,8,1	25	2400	3,8	
14:40:00	83	0.07	1	-	1	700	3,8	341	1600	3	
14:45:00	122	0.08	1	-	1	750	8,1	16	1200	8	

Revision date: 15/03/2007 2:08 PM

CLOUD PHYSICS PROCESSING LOG

Flight number: **B274** **T/O:** 11:07:30
Date of flight: 02/03/07 **Land:** 14:54:20

A) FFSSP PROCESSING To Exeter		
Processing Stage	Done?	Comments
1) Transfer *.txt files from DVD to processing PC		
Bnnn_FFSSP_hh.txt for each hour of data Bnnn_FFSSP_HVMS.txt		**hh =** **Last sec processed =**
2) FTP the files (ascii) from the PC to directory PMSDATA: on FLOODS		**File size =**
3) FLOODS> **RUN MRFB:[PMS.FAST_FSSP]FSSP_EXTRACT_TAS** a) Flight number: **Bnnn** b) Path name: **MFDDATA:Bnnn_MFDX** c) Output directory: **PMSDATA:** d) Start time: *0 if unknown (see comment box)* e) End time: *240000 if unknown*		Use time just before/after take-off/landing. If T/O /landing just after/before the hour, ensure start/end time is before/after the hour if there is an FFSSP_hh.txt file for that hour.
4) FLOODS> **RUN MRFB:[PMS.FAST_FSSP]FFSSP_PROCESS_TXT** a) Flight number: **Bnnn** b) Directory: **PMSDATA:** c) TAS in processing: **Y** d) Vel threshold (clicks) **0** e) Calibration file: *Use the most recent calibration file.* Format FFSSP_CALddmmyyyy.txt Calibration files to be stored in MRFB:[PMS.FAST_FSSP] f) Adjust FFSSP time **Y/N** g) If Y, enter value to add to data time (seconds)		**Total glitches =** **Sec file written ok?** **Note calibration file used** Yes only if gross errors occur in FFSSP time eg; ~ 1hour
5) FLOODS> **WAVE** a) WAVE> **write_procffssp_to_m5,'pmsdata:Bnnn_procffssp.dat', 'mfddata:Bnnn_mfdX','pmsdata:Bnnn_m5procffssp',/auto** b) WAVE> **exit**		Use PVWAVE for this section **Note time correction applied to FFSSP by /auto =**
6) FLOODS> **MODIFY** a) Modifying datasets: **pmsdata:Bnnn_m5procffssp** b) Dataset: **mfddata:Bnnn_mfdX** c) New dataset: **mfddata:Bnnn_mfdY (y=x+1)** d) Parameter description file: *leave blank to use default*		**Input file size =** **M5 output file size =**
7) CHECKS: i). Are FFSSP and JW/Nevzorov LWC synchronized in time? *In flight_plot, parameters* *JW LWC para 535* *Nevzorov LWC para 602* *FFSSP LWC para 1202* ii). If not, repeat from step 5b replacing /auto with **addt=x** which adds x+20 secs to FFSSP time.		**Synchronized?**

CLOUD PHYSICS PROCESSING LOG

Flight number: **B274**
Date of Flight: 02/03/07

B) 2D PROCESSING	REPROCESS +1hr	
Processing Stage	Done?	Comments
1) Transfer Bnnn.dat file from CD/DVD to PC	Y	
2) Zip up file on PC (Bnnn.zip)	Y	
3) FTP the zipped file (binary) from the PC to the directory SEADAS_DATA:[SEADAS_DATA] on FLOODS	Y	42514 blocks
4) Log on to FLOODS		
5) Unzip SEADAS_DATA:[SEADAS_DATA]Bnnn.zip	Y	**Size of Bnnn.dat = 321221**
6) FLOODS> **WAVE**	Y	Use PVWAVE for this section
WAVE> **CONVERT_SEADAS_FILE** a) Input file: **SEADAS_DATA:[SEADAS_DATA]Bnnn.dat** b) Output file: **SEADAS_DATA:[SEADAS_DATA]Bnnn_seadas.dat** WAVE> **exit**		**Blocks read = 57409** **Blocks written =** 57409 **Bad reads = 0**
7) FLOODS> **RUN MRFB:[PMS.SEADAS]READM200_FILE**	Y	
a) Default directory: **PMSDATA:** b) Flight number: **Bnnn** c) Disk file name: **SEADAS_DATA:[SEADAS_DATA]Bnnn_seadas.dat** d) Comment string: e) Start time: *0 if unknown (T/O – 5 min)* f) End time: *240000 if unknown (Land + 5 min)* g) Read 2DC: **Y** h) Read 2DP: **Y** i) Secondary data: **Y** j) FSP-SYNC: **Y** k) cmd.str: **Y** l) Auto time correction: **N** m) Full length secondary:**N**	 Y Y	 **Start = 110500** **End = 145500** Ignore error message scroll (vestigial error from tapes) **Are FRW, FSP, IMB, PCA,SEC** **files in PMSDATA?** **Are they non-zero in size?**
8) FLOODS> **WAVE**	Y	2D image display and printing
i). WAVE> **imagedisplay** a) 2D directory name: **PMSDATA:** b) Flight number: **Bnnn** c) File generation no: **0** d) Time from IWC plot: **N** e) Select probe: (**1**) 2DC (**2**) 2DP f) Start time: *As in 7e above* g) End time: *As in 7f above* h) Time interval (sec): **5** recommended (0 for all images) ii). WAVE> **auto_image** a) 2D directory name: **PMSDATA:** b) Flight number: **Bnnn** c) Enter date: **YYYYMMDD** d) Enter start time: *0 if unknown (T/O – 1 min)* e) Enter end time: *240000 if unknown (Land – 1 min)* f) Enter time interval (sec) between successive imaged blocks: **10** iii). WAVE> **exit** to create files iv). FTP ascii *.PS files from PMSDATA: to PC v). Load each into Ghostview or other pdf-converter vi). Output as pdf file (720 dpi resolution), appending name prefix of **CORE-CLOUD-PHY_** to converted files		Must be done from FLOODS itself. **Note any problems with images;** Only noise on 2DP until approx 134000 Prepare imagery for Core data From own PC again **Start = 110500, 133500** **End = 144700** 2DC 102 pages 2DP 44 pages FAAM_YYYYMMDD_R0_ Bnnn_2Dx-images.ps Notes on this in instructions

9) FLOODS> **RUN MRFB:[PMS.SPEC2D.AUTO]PROCESS2D_AUTO** a) Flight number: **Bnnn** b) Directory: **PMSDATA:** c) File generation: *Hit enter* d) Time correction: *Time offset of the 2D data* e) TAS: **Y** f) MFD directory: **MFDDATA:Bnnn_MFDX** g) Probe number: (**1**) 2DC (**2**) 2DP (**0**) Both *0 unless either probe known to be faulty* h) Start time: *0 if unknown (T/O + 30sec)* i) End time: *240000 if unknown (Land – 30sec)* j) Nominal averaging: **0.2** seconds for conversion to M5 k) Particle type 2DC: **8** if known to be in ice cloud **11** if known to be in water cloud l) Particle type 2DP: **8** if known to be in mixed-phase **8** if unknown m) Coefficient choice: **2** n) Output root filename: **PMSDATA:Bnnn_PROC2D**		NB. an error message may appear, floating point exception, rerun and use time quoted in error message, repeat until successful. **X = A** **Start =** 110800 **End =** 145400 **Time data processed to =** 144705 **2dproc files present? Y** *.2dc, *.2dp and *.dat
10) FLOODS> **WAVE** i) WAVE> **WRITE_PROC2D_TO_M5, 'PMSDATA:BNNN_PROC2D.DAT', 'PMSDATA:BNNN_M5PROC2D'** ii). **exit**	**Y**	Use PVWAVE for this section Error message about HDDR file should be ignored. **Records = 15103, 178**
11) FLOODS> **MODIFY** a) Modifying datasets: **pmsdata:Bnnn_m5proc2D** b) Datset: **mfddata:Bnnn_mfdX** c) New dataset: **mfddata:Bnnn_mfdY** d) Parameter description file: leave blank to use default	**Y**	**X = A** **Y = (X+1) = B**
12) CHECKS: Are 2DC/2DP IWC of comparable magnitude and well-correlated with Nevzorov TWC? *In flight_plot, parameters* *Nevzerov TWC para 605* *2DC IWC para 1302* *2DP IWC para 1312*	Y	**Correlated? Y**

CLOUD PHYSICS PROCESSING LOG

Flight number: **B274**
Date of Flight: 02/03/07

C) PCASP PROCESSING		
Processing Stage	Done?	Comments
1) Complete stage 7) in 2D processing Ensures Bnnn_FSP.DAT containing raw PCASP data is written to directory PMSDATA:	Y	
2) FLOODS> **RUN MRFB:[PMS.PCASP]PROCPCASP_NEW**	Y	
a) Flight number: **Bnnn** b) File name: **PMSDATA:Bnnn_FSP.DAT** c) Root output name: **PMSDATA:Bnnn_PROCPCASP** Produces PMSDATA:Bnnn_PROCPCASP.DAT (binary) PMSDATA:Bnnn_PROCPCASP.OUT (ascii) d) Minimum size channel: *default = 1* *If smallest size channel are known to be noisy the value of the highest noise free channel to be entered here* e) Calibration volume flow rate: *Use the most recent value. 1.8ccs^{-1}* *Calibration files to be stored in **Exeter*** *Entering zero gives default value = 1.0 cm^{3}s^{-1}* f) Time correction: *Same value as used in 2D processing stage 9d* g) Start time: *0 if unknown* h) End time: *240000 if unknown*		**Min size = 1** **Vol flow rate =** 1.15 110900 145300
3) FLOODS> **WAVE**	Y	Use PVWAVE for this section
i).WAVE> **write_procpcasp_to_m5, 'pmsdata:Bnnn_procpcasp.dat', 'pmsdata:Bnnn_m5procpcasp'** ii). WAVE> **exit**		
4) FLOODS> **MODIFY**	Y	
a) Modifying datasets: **pmsdata:Bnnn_m5procpcasp** b) Dataset: **mfddata:Bnnn_mfdX** c) New dataset: **mfddata:Bnnn_mfdY** d) Parameter description file: *leave blank to use default*		**X = B** **Y = X+1 = C**
5) CHECKS	Y	
Are PCASP and JW peaks synchronous? *In flight_plot, parameters* *Neph – total blue scatter.* *PCASP conc para 1550*		**Merged OK? Y**

FAAM Dropsonde Flight Log

Flight No.	B274	Date	02/03/2007
Page No.	1 of 1	Operator	SWH

GMT	**Sonde No.**	**Event**	**Comments**
		e.g. launch, splashdown	*e.g. windata? PTH data? Lat/Long*
113551	1	Launch	394.44 -21.78 5.09 163.00 51.31 0.01 -26.781714 64.919455 7575.09 3
114108	1	Land	984.18 0.04 90.33 95.74 19.50 -18.78 -27.018046 65.035644 852.85 4 6
114453	2	Launch	375.47 6.18 2.05 175.41 115.91 1.92 -27.698212 65.770331 8249.40 4
115400	2	Land	989.40 -4.50 91.61 57.65 23.61 -11.42 -27.725683 65.814024 606.17 6 8
115349	3	Launch	375.81 -8.80 1.12 190.72 49.42 -0.00 -28.455035 66.553532 8063.25 5
120238	3	Land	996.35 -15.03 84.64 38.53 21.82 -12.94 -28.500209 66.587581 637.90 7
120158	4	Launch	376.19 -8.04 1.15 210.61 36.47 -2.08 -29.184727 67.270774 8234.09 5
121021	4	Land	1003.40 -16.77 55.47 41.50 18.04 -11.92 -29.210765 67.296180 661.06 8
121026	5	Launch	376.56 -15.62 1.78 191.01 40.59 -0.03 -29.992244 68.004121 7992.31 7
121916	5	Land	1008.85 -17.25 80.10 105.98 0.04 -0.27 -29.949837 68.037609 678.00 6
123106	6	Launch	376.21 -9.11 1.55 246.54 48.62 -1.40 -24.990416 69.000607 8215.73 4
123956	6	Land	1009.38 -18.49 46.99 48.05 3.41 -10.36 -24.869892 69.017675 675.36 9
124253	7	Launch	376.05 -9.63 1.73 253.82 32.49 -0.15 -24.105064 68.226810 8171.11 4
125150	7	Land	1007.29 -18.05 60.24 49.79 11.88 -10.40 -24.039988 68.237258 638.91 9
125300	8	Launch	376.61 -12.01 2.00 281.73 23.54 -3.22 -23.222475 67.525476 7990.78 5
130155	8	Land	1003.14 -11.25 85.85 43.49 18.26 -10.35 -23.250567 67.474753 597.45 8
130317	9	Launch	379.85 -27.39 3.25 230.27 20.27 -1.94 -22.508486 66.683879 7549.89 9
131157	9	Land	998.31 -6.83 78.22 63.03 20.76 -10.74 -22.508029 66.702534 578.50 7
	10	Launch	
	10	Land	

Flight: B274

KEY

- Not Fitted
- Fitted, Not Operated
- Duff Data
- Minor Problems
- OK

Thermometers
- Cabin Temperature:
- Heimann:
- Deiced Temp:
- Non-deiced Temp:

Hygrometers
- FWVS:
- General Eastern:
- Johnson Williams:
- Nevzorov:
- Total Water Probe:

Cameras
- Downward Facing:
- Forward Facing:
- Rearward Facing:
- Upward Facing:

Navigation + Aircraft
- Cruciform GPS:
- GIN Applanix:
- INU Honeywell:
- Radar Altimeter:
- RVSM IAS:
- RVSM Static Pressure:
- XR5 GPS:

Report Created 15/03/2007 12:13:14

Misc Core
- AMTG:
- AVAPS:
- Cabin Pressure:
- Fax machine:
- Printer:
- S9 Static Pressure:
- Satcom C:
- Satcom H:
- Turb Centre-Static:
- Turb Left Right:
- Turb Up-Down:
- Turb Horizontal Chk:
- Turb Vertical Chk:
- Weather Radar:

DLUs:
- DLU AERACK:
- DLU BBR Lower:
- DLU BBR Upper:
- DLU Core Chem:
- DLU Core Consoles:
- DLU Port Aft:
- DLU Port Fwd:
- DLU Stbd Fwd:

Radiometers
Lower:
- BBR (clear) Lower:
- BBR (IR) Lower:
- BBR (red) Lower:

Upper:
- BBR (clear) Upper:
- BBR (IR) Upper:
- BBR (red) Upper:

- ARIES:
- DEIMOS:
- IR Camera:
- JNO2 Lower:
- JNO2 Upper:
- JO1D Lower:
- JO1D Upper:
- MARSS:
- SHIMS Lower:
- SHIMS Upper:
- SWS:
- TAFTS:

Last Updated: 14/03/2007 15:55:29

Cloud Probes
- 2DC:
- 2DP:
- FFSSP:
- PCASP:

- ADA:
- CCN:
- CDP:
- CIP 100:
- CIP 25:
- CPI:
- CVI:
- SID1:
- SID2:

Aerosol
- CPC 3025A:
- Filters 47mm:
- Filters 90mm:
- Neph - Dry:
- Neph - Wet:
- PSAP:
- AMS:
- CPC 3025 (AMS)
- INC:
- VACC:
- CPC 3010A (CVI):

Chemistry
- CO Aerolaser 5002:
- NOx TE42C:
- Ozone TE49C:
- Ozone TE49:
- SO2 TE43C:
- TDLAS (NIR) CH4:
- TDLAS (NIR) CO2:

- FAGE:
- Formaldehyde:
- NOxy:
- ORAC:
- PAN:
- PERCA:
- Peroxide:
- PTRMS:
- TDLAS (1C):
- WAS Bags:
- WAS Bottles:

Misc Non-Core
- CASI/ATM:
- LIDAR:
- LTI:
- SAW Hygrometer:

Faults / Incidents Log

Flight No. B274
Date: 02 March 2007

Instruments

1. Unable to align INU correctly in the Hanger (pre-flight) as no GPS signal. On exiting the hangar, GPS location was obtained within about 5 minutes, and then it was discovered that there was no comms with the INU. An RS232 link was found to be pulled out on the fwd face of the aft core console, possibly during some rummaging around by the CCM. Connection restored, INU process restarted and the INU went satisfactorily into align.
2. Satcom initially not working, wiggling connections and restarting h_satcom seemed to make it work.
3. TWC status light intermittently on at 25kft – suspect low temperature.

Aircraft

Nil

Satcom-H Calls

Nil

Post Flight - Turb Probe Water Traps

1. Indicate Amount of Water: a) Nil b) 1-2 drops c) ¼ full or more d) Ice present
2. Emptied by:
3. Dried by:

Flight Manager's Data Processing Status

Flight No: B274 Date of flight: 2/3/07
Flight Manager: AMW

Mfd data must be backed up within a week.
If it can't be done by the Cloud Physics Operator in that time the FM must back it up

On day of flight		
Action	**Link / Option**	**Date**
Update Database & Note BBR Fit	Database	2/3/07
Create Fltcons & check BBR fit	Option 9	2/3/07
Transfer & process Data	Option 2	2/3/07
Ftp qldata to BADC	project_spaces/faam/ quicklook	3/3/07
Check Rawdata	flight_plot	2/3/07
Raw data to BADC	Option 7	3/3/07
Copy & Convert Fltsumm file	Copy from optical to fltsumm directory Set def fltsumm run tarexec:convert_summ	2/3/07
Edit Fltsumm/ send to BADC	Option 10	3/3/07
Copy Flight logs to Seagate	Flight Logs	2/3/07
Download photos, clear camera & email Doug	To Flight Logs and Turb Probe Photos	2/3/07
Ftp CGPS.bin file to BADC	project_spaces/faam/ javad_gps	3/3/07
Check MFDdata	flight_plot	2/3/07

On day after flight		
Action	**Link / Option**	**Date**
Ftp PSAP to FLOODS	Bnnn_psap_data	-
Merge PSAP into mfddata	wave .run mergepsap bnnn_mfda (b,c)	-
Record any MFD changes	edit mfddata:mfddata.txt	-
NETCDF to BADC	Option 4	3/3/07
Upload .nc from BADC	To USB stick (WS_FTP Pro)	3/3/07
Data quality check	Run Checkg on Linux pc	3/3/07
Ftp file to BADC	/incoming/faam/campaign-processed-core	3/3/07
Print out quality file	put in Faults Book	-
Backup raw data to optical then to firesafe	Option 6	3/3/07
Backup mfd if Cloud Physics Operator can't	MFD Backup Instructions.doc	MFDC backed up KFT 02/03/07
Ftp mfd to BADC	Not yet set up	Watch this space
Video tapes to PI or cupboard	Video Tape Log	3/3/07
Complete & save this form	**Data_Processing_ Logs**	

MISSING LOG SHEETS:

The following log sheets are not available for flight B274:

Log	Reason
Pre-flighter log	No log available
De-brief	Sortie De-brief yet to be created by Kent Moore
Core Chemistry	pre flight only, unmanned operation on auto calibrate so no In Flight log

Document control

Revision	Date	Author	Comments
r0	10 Oct 2007	Doug Anderson	Initial version missing the above noted logs
r1			
r2			

VIDEO RECORDINGS:

2 x Forward Facing Cameras
2 x Rearward Facing Cameras

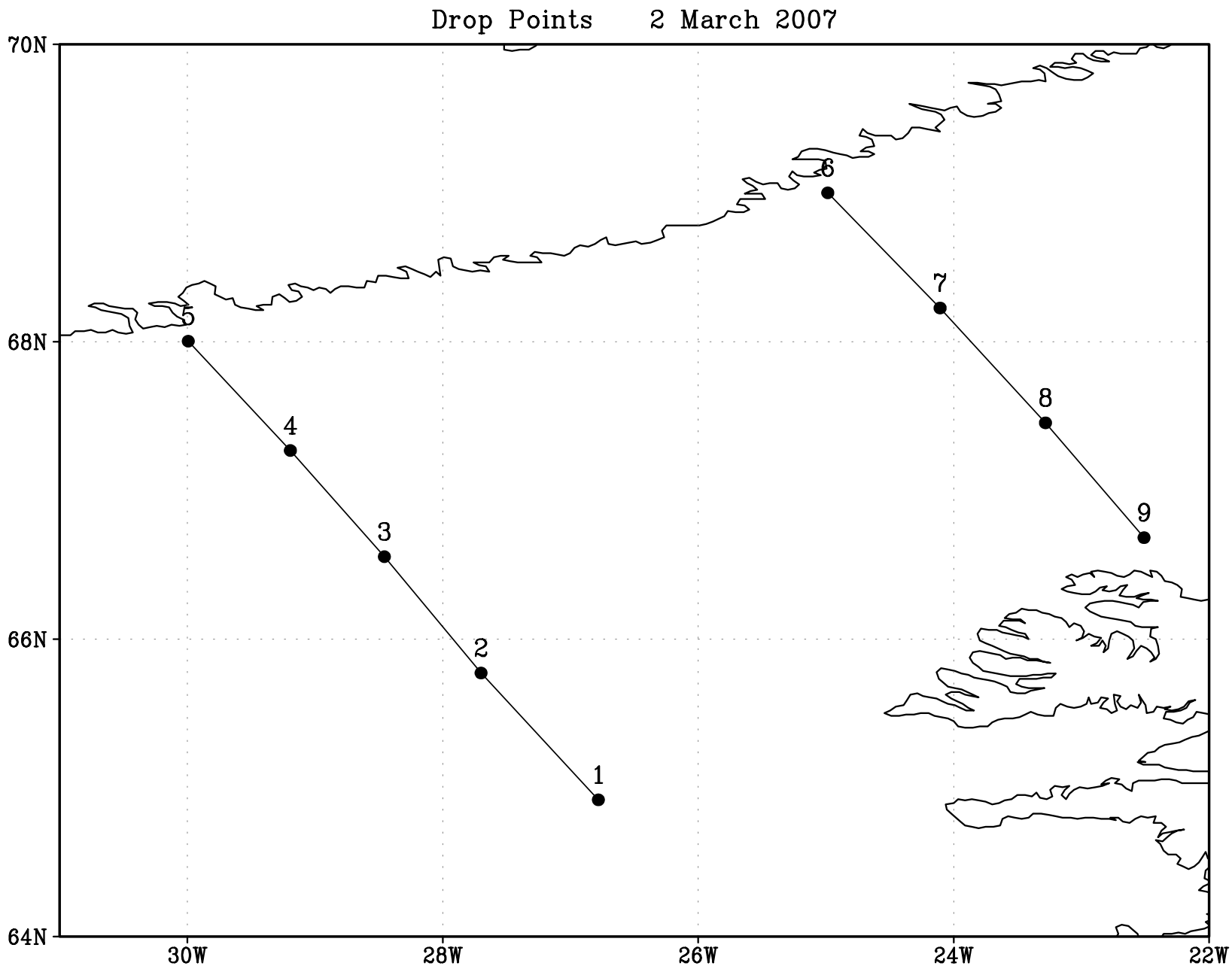
Digital8 video recordings from this flight reside with :

Dr Ian A. Renfrew

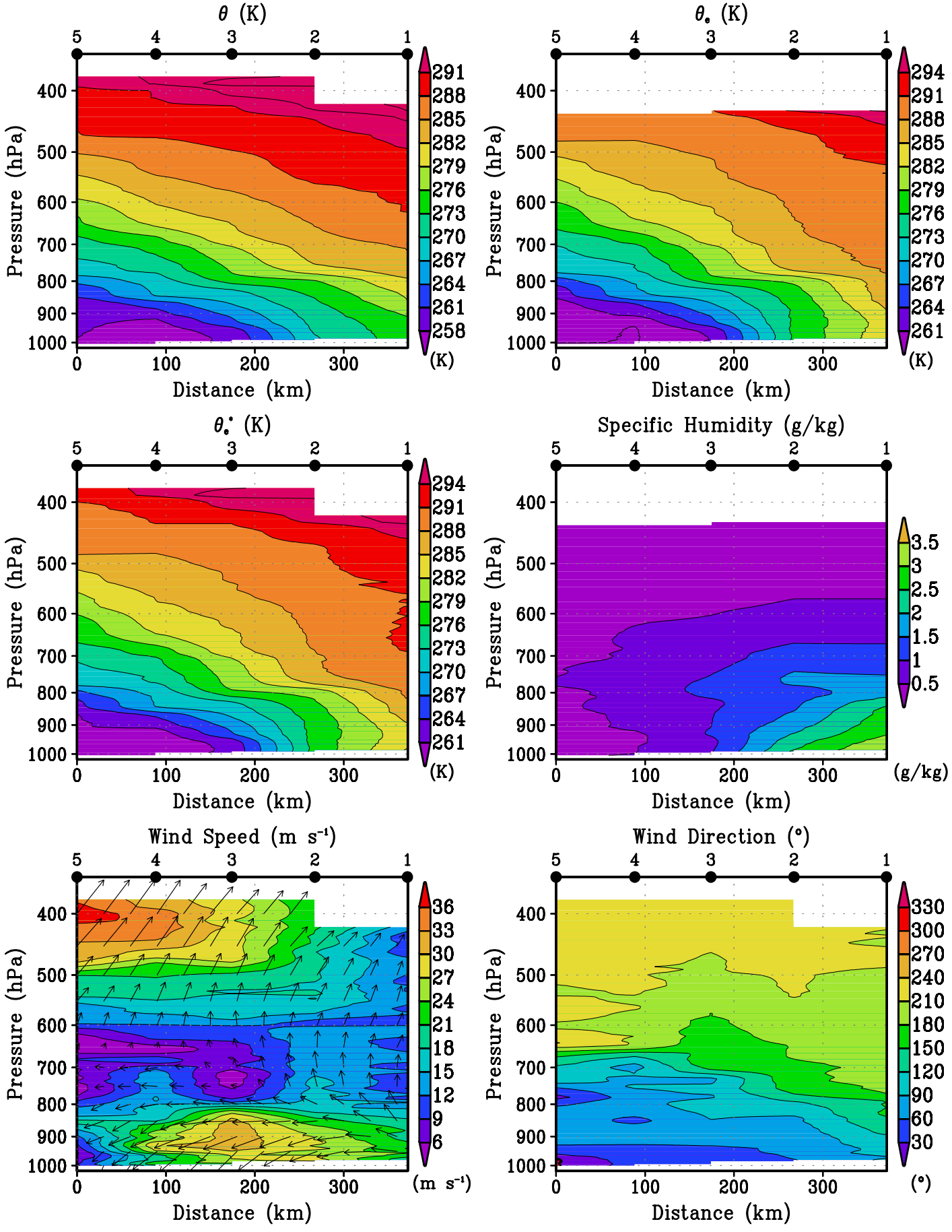
Dr Ian A. Renfrew
Reader in Climate System Dynamics
School of Environmental Sciences
University of East Anglia
Norwich, NR4 7TJ, United Kingdom
Room: 2.33

Tel: +44 (0) 1603 592557
Fax: +44 (0) 1603 591327

E-mail: i.renfrew@uea.ac.uk


Drop Points 2 March 2007
70N
68N
66N
64N
30W
28W
26W
24W
22W
1
2
3
4
5
6
7
8
9

Dropsonde No.1 – No.5, 2 March 2007



Dropsonde No.6 – No.9, 2 March 2007